

**Practice****10.5 Independent Events**

Events D , E , F and G are independent, and $P(D) = 0.2$, $P(E) = 0.1$, $P(F) = 0.4$, and $P(G) = 0.25$. Find the probability of each combination of events.

1. $P(D \text{ and } E)$ _____
2. $P(D \text{ and } F)$ _____
3. $P(E \text{ and } F)$ _____
4. $P(D \text{ and } G)$ _____
5. $P(D \text{ and } E \text{ and } F)$ _____
6. $P(E \text{ and } F \text{ and } G)$ _____

A bag contains 3 white marbles, 2 red marbles, and 7 blue marbles. A marble is picked at random and is replaced. Then a second marble is picked at random. Find each probability.

7. Both marbles are blue. _____
8. The first marble is white and the second marble is red. _____
9. The first marble is white and the second marble is not white. _____
10. Neither marble is red. _____
11. The first marble is blue and the second marble is red. _____

A number cube is rolled twice. On each roll, the number on the top face is recorded. Find the probability of each event.

12. The first number is greater than 5 and the second is less than 3. _____
13. Both numbers are greater than 4. _____
14. The first number is even and the second number is odd. _____
15. Both numbers are less than 2. _____
16. Neither number is greater than 4. _____

A number cube is rolled, and two coins are tossed. Find the probability of each event.

17. The number on the cube is 2 and both coins are heads. _____
18. The number on the cube is even, one coin shows heads, and one shows tails. _____
19. The number on the cube is greater than 4 and both coins are tails. _____
20. The number on the cube is greater than 2 and the coins show different sides. _____